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M^{edical Education Digest}

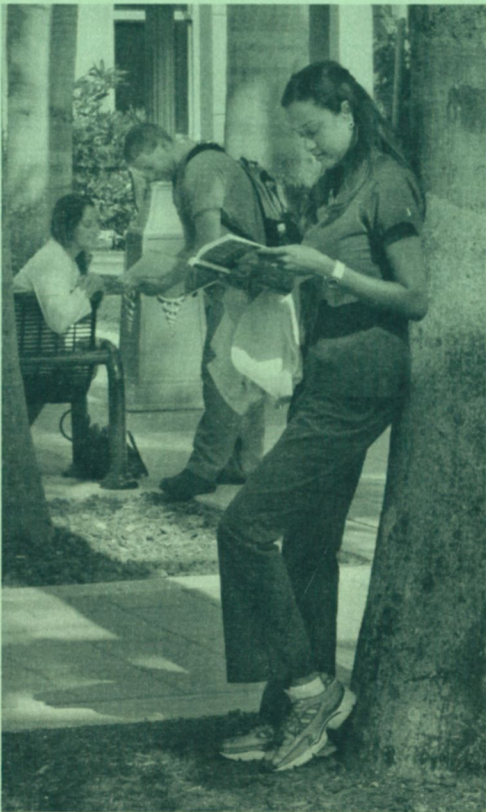


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Increase in Applicants, Enrollment, and Diversity in Medical Schools



The Association of American Medical Colleges indicated in an October 2010 report that the 133 allopathic medical schools in the United States and 17 in Canada had increases in the number of applicants, enrollments, and underrepresented racial and ethnic groups. There was an increase of first-time applicants of 2.5 percent in the 2010 entering class from 2009 or a total of 31,834 compared

to 31,063. The total number of applicants in 2010 was 42,742 compared to 34,860 in 2001.

While the percent of black/African American applicants decreased by 0.2 percent, Hispanic/Latinos increased from 3,061 to 3,271 or by 6.9 percent between 2009 and 2010. Native American applicants increased by 9.5 percent or from 379 to 415 in the same time period, and Asian American applicants increased by 3.2 percent. The number of male applicants was 22,534 (52.7 percent) compared to 20,207 females (47.3 percent). Of the 18,665 students who enrolled, 46.9 percent were female and 53.1 percent male.

Between 2003 and 2010 the number of medical school enrollees climbed by almost 13 percent from 16,541 to 18,665. The number

of Asian American enrollees increased between 2003 and 2010 from 3,460 to 4,214, Hispanic-Latino from 1,091 to 1,350, black or African American from 1,205 to 1,350, and Native American/Alaskan Natives from 168 to 191 (as of October 4, 2010).

(Association of American Medical Colleges Press Release. Medical school enrollment shows diversity gains—number of first-time applicants also up, demonstrating interest in medicine as a career; October 13, 2010.)

A Look at Debt and Medical Education

The percent of medical students having an education debt of \$100,000 was more than 78 percent of graduates. However, 43 percent have debts that are \$200,000 or more, according to a survey reported by the Association of American Medical Colleges in October 2010. This includes debt from premedical and medical college. In addition, 26 percent also had non-education debts of \$11,000 or more. The median cost of tuition and fees was \$46,899 for private schools and \$28,685 for public schools. However, the median cost to attend medical school was \$66,985 for private schools and \$49,298 for public schools.

(Association of American Medical Colleges. Medical student education: costs, debt, and loan repayment facts. www.aamc.org/first; October 2010.)



“Medical Education Highlights for Primary Health Care”

The Medical Students as Teachers Model Grows in Popularity

A case is made for fourth-year medical students to be candidates for students-as-teachers (SAT) training programs at the undergraduate medical education level. With four years of medical training, these students are about to become interns and residents and are at an ideal stage to receive training as teachers. Teaching is recognized by the Accreditation Council for Graduate Medical Education (ACGME) as a necessary skill and duty for physicians-in-training. Indeed, residents are required to train both medical students and peers, and more than half of the graduate medical education programs provide formal instruction in teaching skills.

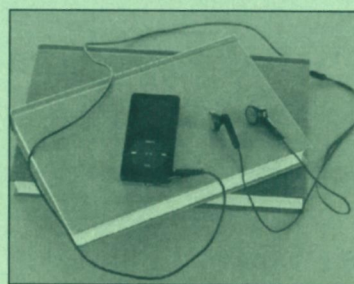
A survey of 130 medical schools revealed that 99 had formal or informal SAT programs. The roles of the students included tutoring, peer mentoring, and serving as small-group facilitators in such areas as basic science, doctoring courses, physical diagnosis, problem-based learning, and contributors to curriculum design. The themes of the SAT programs derived from 39 medical schools were the development of future physician educators, enhancement of medical student learning, assistance for faculty, curriculum development, enhancement of teaching effectiveness, and strengthening student teaching skills.

A number of challenges also were identified, among which were competition with other educational demands, difficulty in recruiting and retaining faculty, difficulty in convincing others of the value of the program, lack of commitment by medical students, and inadequate evaluation processes of student-teachers.

(Soriano RP, et al. Teaching medical students how to teach: a national survey of students-as-teachers programs in U.S. medical schools. Academic Medicine. 85:1725-1731;2010.)



Medical Students Receive iPods to Enhance Education



Every medical student at the University of Central Florida (UCF) will be receiving an iPod touch to assist them in their education. The decision to do so was based on a survey performed by UCF of U.S. and Canadian medical schools. This

will not only provide instant access to medical information but also will allow students to listen to lectures and view diagrams.

Ohio State University was the first to provide the device to its medical students in 2007. Today, more than two dozen medical schools include in their curriculum the use of handheld devices such as the iPod. Bethany Ballinger, M.D., the director of clinical informatics and an emergency room physician at Ohio State, remarked that in the past, individuals would read all the journals they received, but now there is too much to cram into a person's memory, and it requires being selective to determine what one needs to learn to remain up to date and manage patients.

The iPods help students learn on their own and have access to the most recent information rather than to depend on texts sitting on a shelf that may have information that is outdated. UCF incorporates instruction in the use of the devices and software into the courses. Training in the use of the devices by the first-year medical students is for the purpose of learning the basics about various software programs. As students continue the course of study, they learn how to use iPods for more complicated cases. When students graduate, they keep the iPods since they are covered by the technology fee they paid.

(Lundy S. UCF gives med students high-tech devices to stay in touch, iPod style. Chicago Tribune; October 11, 2010.)

Medical Students and PGY-1 Positions

Because of graduates of osteopathic medical schools and graduates of international schools, 95.4 percent of the PGY-1 positions in the 2010 National Resident Matching Program (NRMP) were filled. Only 65.7 percent of available PGY-1 positions in the NRMP were filled by United States M.D. seniors. Since 2006, the number of unfilled PGY-1 positions after the NRMP match has decreased from 1,587 to 1,060 in 2010. However, the number of M.D. graduating students is increasing more rapidly than the number of PGY-1 positions.

(Sondheimer HM. Graduating U.S. medical students who do not obtain a PGY-1 training position. Journal of the American Medical Association. 30 (11); September 15, 2010.)

Physical Examination: Is it a Dying Art?

Abraham Verghese, M.D., associate chair for the theory and practice of medicine at Stanford University, laments that medical schools in the United States have let the physical examination slide. He quips that a person could come to a hospital with a missing finger and that doctors would insist on an MRI, a CT scan, and an orthopedic consult to confirm it.

Dr. Verghese notes that he has encountered interns and residents who do not know how to test a patient's reflexes or palpate the spleen. In Ethiopia and India where he trained, medical technology

was scarce, which meant good examination skills were a necessity. Even today he believes that thorough physical exams can result in acquiring important information so doctors can determine what tests to order and which ones to skip. He believes that a proper exam earns trust and helps transform two strangers into a doctor and patient.

At Stanford, he developed with colleagues a list of 25 examination techniques that every physician should know and, while they are not the only exams or even the most important ones, they are a place to start. To demonstrate

the importance of observational skills, he has taken students with him to rounds, and when they took their places around the bed, he instructed them to turn their backs to the patient. He then asked what they noticed on the bedside table: A lunch tray? A book? Clues to whether the patient could eat, whether he was alert? Did he look comfortable? Or did he seem to be in pain?

The mission of Dr. Verghese at Stanford is to bring back something that may be considered a lost art: the physical examination.

(Grady D. Physician revives a dying art: the physical. New York Times. October 11, 2010.)

The Social Mission of M.D. and D.O. Medical Schools



Osteopathic medical schools continue to place substantially more graduates into primary care and into underserved areas according to a Josiah Macy Jr. Foundation-supported study headed by Fitzhugh Mullan, M.D.,

of the George Washington University, Children's National Medical Center, and Robert Graham Center. This suggests, he concludes, that osteopathic medicine continues to be influenced by its traditional focus on primary care and rural practice.

He also concluded that osteopathic medicine has been creative in establishing new schools in nontraditional locations, such as Pikeville, Kentucky, Harlem, New York, and in the development of innovative community-based programs such as A.T. Still University in Mesa, Arizona, where all clinical work is based at 1 of 10 community centers.

Substantial variation exists in the ability of medical schools to recruit students to practice primary care and work in underserved areas as well as to recruit students from underrepresented minorities. Regardless of the future of health reform, it was stated that it was essential to have a diverse physician workforce with a strong primary care base to achieve quality, accessible, and affordable health care.

(Mullan F, Chen C, Petterson S, Kolsky G, and Spagnola M. The social mission of medical education: ranking the schools. Annals of Internal Medicine. 152(804-811);2010.)

Medical Schools Unable to Train Enough Physicians

Articles in the *Wall Street Journal* report that while the number of students enrolled in M.D. and D.O. medical schools is expected to increase 23 percent in 2015 and 30 percent by 2018, the nation will face a shortage of physicians that could amount to 150,000. The greatest shortage will be for primary care physicians. This is likely to mean limited access to health care and longer waiting times by patients.

Today, there are 328,909 primary care doctors, and another 45,000 will be needed within 10 years, which is a goal that will be difficult to reach since the number of medical school graduates entering family medicine dropped by about 25 percent between 2002 and 2007. Attempting to help address this problem is the new health care legislation, which provides incentives for medical school graduates to enter primary care, including a 10 percent increase in Medicare for primary care physicians.

An evolving problem, however, is a growing shortage of residency training positions. While it was hoped that the new health care bill would increase the number of funded residency positions, this provision did not get into the law. While several new medical schools have been established and others have expanded, the pace of residency training positions has only grown at somewhat less than one percent. A suggestion regarding how to meet the primary care needs of the health care system has been to limit the number of specialty positions.

(Sataline S and Wang S. Medical schools can't keep up. The Wall Street Journal; April 12, 2010. Medical School enrollment in 2015 will miss goal. The Wall Street Journal; May 10, 2010.)

Lower MCATs/Demographics and Withdrawal or Dismissal from Med School

A National Institutes of Health-supported study (National Institute of General Medical Sciences) revealed that lower MCAT scores (i.e., less than 29) resulted in a significantly greater chance of students not receiving passing grades on their first attempt. It also was found that students who entered medical school with a debt load of \$50,000 or more before starting the program were more likely to withdraw, be dismissed, or graduate without passing the necessary exam.

Those students who were female and those who participated in a college laboratory research project were reported to be less likely to be dismissed or graduate without passing the necessary examinations. Graduates who did not pass each of the components of the U.S. Medical Licensing Examination (USMLE) on the first attempt were classified as having a suboptimal outcome.

A large majority of students (88.7 percent) graduated and passed the USMLE

in their first attempt, while another 8 percent graduated but did not pass the exam on their first attempt. However, 1.2 percent withdrew or were dismissed for academic reasons.

These findings may help to identify matriculants that may benefit from additional support to improve the likelihood of the outcome of that group being optimal.

(Andrioli D and Jeffe D. Prematriculation variables associated with suboptimal outcomes for the 1994-1999 cohort of U.S. medical school matriculants. *Journal of the American Medical Association*. 304:1212-1219; 2010.)

High-Quality Care: Desired Outcome of Medical Education

What if the quality of care drove medical education? A multi-attribute approach is identified by Sklar and Lee, which includes six sub-objectives for quality medical care. These attributes include care that is as follows:

Effective

Curative of Illness
Prevention
Reduce suffering

Safe

No harm from care
No errors

Equitable

Justice
Finance
Communication

Timely

No delay in acute care
Access to chronic care

Efficient

Cost-benefit analysis
Reduction of waste

Patient Centered

Cultural benefits
Ethical values

(*Academic Medicine*. 85:9.pp1401-1404; 2010.)

When Does Someone Become a Physician?

Some students respond to the question of when someone actually becomes a physician by indicating it occurs when one begins practicing. Others say it occurs when one receives a license to practice. Still others say it happens when they receive their degree. Another option is when one enters residency. It is considered by some that it occurs when one first touches a patient, or it is the first time one saves a life.

Steven L. Kanter, editor of *Academic Medicine*, concludes that the transition from layperson to professional begins the first day of medical school. He remarks that nothing magical happens at the time a degree is awarded. The process of socialization and culturalization happens immediately upon starting medical school when the students conduct themselves in new ways and mature intellectually as well as professionally. This process begins first as a student doctor and eventually as a doctor. It is up to the students to begin the process of reflection as their underlying identity evolves from an undergraduate student to a medical student, from layperson to professional person, from learner to health professional.

(Kanter SL. An open letter to new medical students. *Academic Medicine*. 85:9.pp1395-1396; 2010.)



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Nova Southeastern University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia, 30033-4097; telephone number: 404-679-4501) to award associate's bachelor's, master's, educational specialist, and doctoral degrees.

Nova Southeastern University admits students of any race, color, sex, age, nondisqualifying disability, religion or creed, sexual orientation, or national or ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school, and does not discriminate in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school-administered programs.

Medical Education Digest

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Continuing Medical Education Credit Form

One (1) hour of continuing medical education credit may be obtained by reading the *Medical Education Digest* and completing the following evaluation that is being used to assess the reader's understanding of the content. Please circle the answers you believe to be correct for all four questions located on this two-sided form. To acquire CME credit, physicians must mail, fax, or deliver the form (also available online at <http://medicine.nova.edu>), including both the completed quiz and evaluation form by **December 15, 2010** to: Office of Education, Planning, and Research, Nova Southeastern University College of Osteopathic Medicine, 3200 South University Drive, Fort Lauderdale, Florida 33328. Email: lspeiser@nova.edu; Fax: (954) 262-3536. **Please complete and return the evaluation form attached on the reverse side by fax or email.**

AOA or AMA No. _____ Print Full Name _____

The correct answers will be published in the next issue of the *Medical Education Digest*.

1. *Quality health care that is effective should include all of the following except:*
 - a. Curative of illness
 - b. Prevention
 - c. Health insurance counseling
 - d. Reduction in suffering
2. *Which of the following is not true about those who have enrolled in M.D. medical schools in 2010:*
 - a. Percent of females exceeded the percent of males
 - b. Number of Hispanic/Latinos increased
 - c. Number of Asian Americans increased
 - d. Number of Native Americans increased
3. *More than 75 percent of medical school graduates this past year had debt loads of:*
 - a. \$300,000
 - b. \$275,000
 - c. \$250,000
 - d. \$225,000
 - e. \$200,000
4. *To address the growing shortage of primary care physicians, recently passed health reform legislation:*
 - a. Provides a 3 percent increase in Medicare for primary care physicians
 - b. Provides a 5 percent increase in Medicare for primary care physicians
 - c. Provides a 10 percent increase in Medicare for primary care physicians
 - d. Provides no increase in Medicare for primary care physicians



Answers to the September/October 2010 CME questions: 1. (c) 2. (b) 3. (c) 4. (b)

Target Audience and Objectives

The target audience includes physicians who have faculty appointments at a medical school or who train residents and fellows in hospital-based environments. It also is for non-physician faculty members who have the responsibility for teaching medical students and others who seek education in the continuum of medical education (e.g., residency, continuing education). Also, since residents are typically responsible during their training to train medical students, they too are part of the audience to which the *Medical Education Digest* is directed.

- To provide an overview from the world literature of medical education knowledge, concepts, and skills of contemporary, new, and innovative ways to facilitate learning among medical students, residents, and practicing physicians
- To identify sources of information regarding the medical education process
- To create curiosity among those responsible for the medical education process to read in depth some of those articles that are summarized in the *Medical Education Digest*.

November-December 2010 Evaluation Form

Medical Education Digest

In a continuing effort to fulfill your professional interests and to improve the educational quality of continuing education, please complete this form. Please darken bubble ☒

1) Your field / degree: ☐ MD ☐ DO/AOA # _____

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
2) Reading this issue of Medical Education Digest has influenced the way that I will treat future patients.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) The contents of this issue will be useful in my practice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Was disclosure of commercial relationships made?			<input type="radio"/> Yes		<input type="radio"/> No
5) Were off-label products described?			<input type="radio"/> Yes		<input type="radio"/> No
6) Did you perceive any inappropriate commercial bias or influence?			<input type="radio"/> Yes		<input type="radio"/> No
7) What is the best way to contact you in reference to future articles?					
<input type="radio"/> Phone <input type="radio"/> Email <input type="radio"/> Correspondence <input type="radio"/> Other _____					

If you desire credit, please complete the areas below:

I have read this issue, approved for 1 hour of AMA-PRA category 1 credit & AOA category 1-B credit.

Signature

Date

PLEASE PRINT THE FOLLOWING:

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Accreditation Statements

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Nova Southeastern University Health Professions Division is accredited by the ACCME to provide medical education for physicians. This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through Nova Southeastern University Health Professions Division. Nova Southeastern University Health Professions Division designates this educational activity for a maximum of one (1) hour towards the AMA Physician's Recognition Award Category 1 Credit(s)TM. Physicians should only claim credit commensurate with the extent of their participation in the activity.

AOA

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